

Title (en)  
LIGHT MODULATOR

Publication  
**EP 0303825 B1 19920930 (DE)**

Application  
**EP 88111180 A 19880713**

Priority  
CH 312087 A 19870813

Abstract (en)  
[origin: US4844572A] A semiconductor light modulator is disclosed. The light modulator comprises a semiconductor body and a waveguide for guiding light rays formed in the body. The waveguide comprises waveguide sections of first and second types formed alternately in a series. Each waveguide section of the first type is delimited at least in part by a depletion zone. A voltage U may be applied for controlling the size of the depletion zone delimiting the sections of the first type to vary the ability of the sections of the first type to guide light. Illustratively, when the voltage U is near zero, the light confining characteristics of the sections of the first and second type are substantially identical, so that light rays are guided along the waveguide from one section to another. When the voltage U is increased so as to increase the size of the depletion zones delimiting the waveguide sections of the first type, then there are losses within the waveguide sections of the first type and at the interfaces between the waveguide sections of the first and second type. Thus, the voltage U may be applied to selectively modulate the intensity of light propagating in the waveguide.

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**G02F 1/015**

IPC 8 full level  
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CPC (source: EP US)  
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Cited by  
DE19605794A1; US5889902A

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**CH 667155 A5 19880915**; AT E81213 T1 19921015; DE 3875032 D1 19921105; EP 0303825 A1 19890222; EP 0303825 B1 19920930; US 4844572 A 19890704

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**CH 312087 A 19870813**; AT 88111180 T 19880713; DE 3875032 T 19880713; EP 88111180 A 19880713; US 22487488 A 19880726